Question Q217

National Group:	Switzerland
Title:	**The patentability criterion of inventive step / non-obviousness**
Contributors:	Konrad Becker, Jan D'haemer, Simon Holzer, Thomas Kretschmer, Sava V. Kulhavy, Bruno Meyer, Paul Pliska, Beat Rauber, Martin Sperrle, Marco Zardi
Reporter within Working Committee:	Marco Zardi
Date:	15 April 2011

Questions

I. Analysis of current law and case law

The Groups are invited to answer the following questions under their national laws:

Level of inventive step / non-obviousness

1. What is the standard for inventive step / non-obviousness in your jurisdiction? How is it defined?

Switzerland being a member state of the European Patent Convention (EPC) and having a national Patent Office without substantial examination, it is not surprising that the courts apply the standard of the Boards of Appeal of the European Patent Office (EPO) – see e.g. Federal Supreme Court decision BGE 133 III 229, 331, section 3.

The standard for inventive step is defined in the Swiss patent law by Article 1 paragraph 2 which corresponds in the essence to Article 56 EPC. The reference to „the person skilled in the art" is missing but this difference does not have any consequence in the practice of the courts. However, see also our comments to question 36.

2. Has the standard changed in the last 20 years? Has the standard evolved with the technical / industrial evolution of your jurisdiction?

The Federal Supreme Court used to apply a rather high standard in the years after accession of Switzerland to the EPC (1975 to 1990). A historical survey of the practice of the Federal Supreme Court in this respect can be found in the Federal Supreme Court decision BGE 114 II 82, 85, section 2.b.

With the aim to harmonize, the standard of the Boards of Appeal of the EPO was adapted even though the terminology used by the Federal Supreme Court to argue non-obviousness was still the

one established under the old law (see SUTTER, sic! 6/2004, pages 469-478) Since even in recent decisions the Federal Supreme Court used this terminology (Federal Supreme Court decision BGE 121 III 279; BGer 4C.52/2005 published in sic! 11/2005, pages 825-827; BGer 4A_52/2008 published in sic! 9/2008, pages 643-647) the final avoidance and abolishment thereof has been suggested (HEINRICH, PatG/EPÜ: Schweizerisches Patentgesetz, Europäisches Patentübereinkommen, Kommentar in synoptischer Darstellung, Bern 2010, pages 38-40, PatG 1, Rz. 127-136).

3. Does your patent-granting authority publish examination guidelines on inventive step /non-obviousness? If yes, how useful and effective are the guidelines?

In the case of Switzerland, we have to refer to the guidelines of the EPO because the examination in the Swiss Patent Office does not involve the requirement of inventive step. The EPO guidelines are useful and might also be cited as a reference before Swiss courts as long as they correspond to the case law of the Boards of Appeal of the EPO.

4. Does the standard for inventive step / non-obviousness differ during examination versus during litigation or invalidity proceedings?

Not applicable (see answer to question 3).

Construction of claims and interpretation of prior art

5. How are the claims construed in your jurisdiction? Are they read literally, or as would be understood by a person skilled in the art?

The claims are construed as they would be understood by a person skilled in the art.

6. Is it possible to read embodiments from the body of the specification into the claims?

Yes, it is possible.

7. How is the prior art interpreted? Is it read literally or interpreted as would be understood by a person skilled in the art? Is reliance on inherent disclosures (aspects of the prior art that are not explicitly mentioned but would be understood to be present by a person skilled in the art) permitted?

The prior art is interpreted as it would be understood by a person skilled in the art and reliance on inherent disclosures is permitted (see decision T 12/81 of the Board of Appeal of the EPO).

8. Do the answers to any of the questions above differ during examination versus during litigation?

Not applicable (see answer to question 3).

Combination or modification of prior art

9. Is it proper in your jurisdiction to find lack of inventive step or obviousness over a single prior art reference? If yes, and assuming the claim is novel over the prior art reference, what is required to provide the missing teaching(s)? Is argument sufficient? Is the level of the common general knowledge an issue to be considered?

Always depending on the specific situation, it would certainly be proper to find lack of inventive step over a single prior art reference, if the person skilled in the art would find the claim obvious (see Federal Supreme Court decisions BGE 121 III 125, 138, section 5.c and BGE 123 III 485, 491, section 2.b). The missing teaching can be common general knowledge. Mere argument is not sufficient as it is the interpretation of the person skilled in the art which is decisive.

10. What is required to combine two or more prior art references? Is an explicit teaching or motivation to combine required?

An explicit teaching or motivation to combine two or more prior art references is not required, if the combination would be obvious to the person skilled in the art (Guidelines for the Examination in the EPO C-IV, 11.6), but if the prior art does not contain any suggestion to combine two or more references, the same person skilled in the art would not be motivated to do so (see Federal Supreme Court decision BGE 120 II 312, section 4.b).

11. When two or more prior art references are combined, how relevant is the closeness of the technical field to what is being claimed? How relevant is the problem the inventor of the claim in question was trying to solve?

The closer the technical fields of the references are, the more is it obvious to combine such references. Perhaps it is useful to cite an American judge who said in 1985: „... you cannot claim that the existence of a unicorn should be obvious from taking a trip to the zoo and seeing a horse and a white rhinoceros in adjacent cages.“ (Bertschinger, p. 139).

The importance of the problem to be solved will be discussed later when we refer to the so-called „problem- and solution- approach“ of the EPO (see answer to question 14).

12. Is it permitted in your jurisdiction to combine more than two references to show lack of inventive step or obviousness? Is the standard different from when only two references are combined?

Yes, it is permitted to combine more than two references if it would be obvious to the person skilled in the art. The standard would not be different but, of course, the more references have to be combined, the more it would be improbable for the person skilled in the art to do so. Again, the later discussion of the above mentioned practice of the EPO will clarify this point.

13. Do the answers to any of the questions above differ during examination versus during litigation?

Not applicable (see answer to question 3).

Technical Problem

14. What role, if any, does the technical problem to be solved play in determining inventive step or non-obviousness?

Assuming that the practice of the EPO and, more specifically, the decisions of its Boards of Appeal will be the standard for the determination of the inventive step in litigation before Swiss courts (as it has been practiced in some cases) – in the near future, this will be only one specialised Patent Court – the technical problem to be solved will have a decisive role in view of the already cited „problem- and solution- approach“ used in the EPO.

This four-step-approach consists in a) identifying the „closest prior art“, b) assessing the technical results (or effects) achieved by the claimed invention when compared with this closest prior art, c) defining the technical problem to be solved as the object of the invention to achieve these results, and d) examining whether or not a skilled person, having regard to the closest prior art, would have suggested the claimed technical features in order to obtain the results achieved by the claimed invention (see Case Law of the Boards of Appeal of the EPO, 6th edition, April 2010, page 162).

It is obvious that the third step, i.e. the identification of the technical problem, is an important part of the assessment.

15. To what degree, if any, must the technical problem be disclosed or identified in the

specification?

In general, the technical problem will be disclosed in the specification (see Rule 42(1)(c) EPC), but the problem disclosed in the specification is not always the objective technical problem considering the relevant state of the art as resulting from the above mentioned practice of the EPO. Indeed, the technical problem used for the assessment of non-obviousness / inventive step should be objective as a result of steps a) to c) of the above mentioned practice which means that, in specific cases, the problem disclosed in the specification will have to be reformulated (see the Guidelines for Examination of the EPO, April 2010, C-IV, 11.5.2).

Advantageous effects

16. What role, if any, do advantageous effects play in determining inventive step or nonobviousness?

Advantageous effects can play a role, if they are surprising. But, an unexpected bonus effect does not confer inventiveness on an obvious solution (see T 231/97). Numerous decisions of the EPO illustrate the well-known practice to accept advantageous effect(s) as an indication of inventive step which is quite common for chemical inventions. In a typical case, one or more chemical compounds of the invention will be compared with the structurally closest compounds disclosed in the prior art.

17. Must the advantageous effects be disclosed in the as-filed specification?

Not necessarily in the explicit form of the above mentioned comparative testing but normally in a more general way of disclosing the solution to be achieved by the invention. The requirement is more strict in the case of the so-called „selection inventions“.

18. Is it possible to have later-submitted data considered by the Examiner?

Yes, this is generally accepted practice of the EPO.

19. How “real” must the advantageous effects be? Are paper or hypothetical examples sufficient?

In the context of advantageous effects, it must be assumed that the claimed effects are „real“ (and reproducible – see T 494/99) and that paper or hypothetical examples are not acceptable. If the applicant wants to take the risk and obtain the grant of a patent on the basis of unrealistic results (which the examiner normally cannot verify), any later litigation might result in the revocation of such a patent.

20. Do the answers to any of the questions above differ during examination versus during litigation?

In principle, the standards do not differ during examination (see the practice of the EPO) versus during litigation. However, during litigation, the outcome largely depends on the requests and the allegations of the parties.

Teaching away

21. Does your jurisdiction recognize teaching away as a factor in favor of inventive step /non-obviousness? Must the teaching be explicit?

Yes, it does and it is not necessary to have an explicit teaching in the prior art reference (Case Law of the Boards of Appeal of the EPO, 6th edition, April 2010, page 214).

22. Among the other factors supporting inventive step / non-obviousness, how important is teaching away?

Depending on the facts of the specific case, of course, teaching away can be the most persuading argument in favor of inventive step.

23. Is there any difference in how teaching away is applied during examination versus in litigation?

No, there is not.

Secondary considerations

24. Are secondary considerations recognized in your jurisdiction?

Yes, but they are normally only used in situations where direct methods to evaluate inventive step / non-obviousness are not possible or does not provide a clear picture.

25. If yes, what are the accepted secondary considerations? How and to what degree must they be proven? Is a close connection between the claimed invention and the secondary considerations required?

Besides the already mentioned „teaching away“, the following considerations can be considered: development of the involved technique in a different direction, the time factor (prior art many years old), long time felt need, simplicity of the solution, unexpected results (see question 16) and difficulty of research in the field of the invention. We can imagine various methods to prove such secondary considerations and it will depend on the specific case whether a close connection is required.

Commercial success or similar considerations will, however, not play a role unless combined with other considerations (Guidelines for Examination in the EPO, April 2010, C-IV, 11.10).

In ordinary civil litigation (nullity proceedings) full proof beyond serious doubts must be produced to prove the presence of secondary considerations. In preliminary measures proceedings proof of overwhelming probability is sufficient.

26. Do the answers to any of the questions above differ during examination versus during litigation?

No, they do not.

Other considerations

27. In addition to the subjects discussed in questions 4 - 26 above, are there other issues, tests, or factors that are taken into consideration in determining inventive step/ non-obviousness in your jurisdiction? If yes, please describe these issues, tests, or factors.

No, we are not aware of any other consideration.

Test

28. What is the specific statement of the test for inventive step/non-obviousness in your jurisdiction? Is there jurisprudence or other authoritative literature interpreting the meaning of such test and, if so, provide a brief summary of such interpretation.

The specific statement of the test for inventive step is contained in Article 1, paragraph 2 of the Swiss patent law which corresponds in essence to Article 56 of the EPC. It reads as follows: "Anything that it is obvious, having regard to the state of the art (Art. 7 Para. 2), shall not be a patentable invention”. For the case law interpreting Article 1, paragraph 2 of the Swiss patent law, see our answer to question 2. The most recent relevant literature is HEINRICH, PatG/EPÜ:

Schweizerisches Patentgesetz Europäisches Patentübereinkommen, Kommentar in synoptischer Darstellung, Bern 2010.

29. Does such test differ during examination versus during litigation?

Not applicable (see answer to question 3)

Patent granting authorities versus courts

30. If there are areas not already described above where the approach to inventive step / non-obviousness taken during examination diverges from that taken by courts, please describe these areas.

Not applicable.

31. Is divergence in approach to inventive step / non-obviousness between the courts and the patent granting authority in your jurisdiction problematic?

No, it is not.

Regional and national patent granting authorities

32. If you have two patent granting authorities covering your jurisdiction, do they diverge in their approach to inventive step / non-obviousness?

Not applicable.

33. If yes, is this problematic?

Not applicable.

Proposals for harmonization

The Groups are invited to put forward proposals for the adoption of harmonised rules in relation to the patentability criteria for inventive step / non-obviousness. More specifically, the Groups are invited to answer the following questions without regard to their national laws:

34. Is harmonization of inventive step / non-obviousness desirable?

Yes, of course, but we are quite sceptic whether this wish is realistic or not (see the pending discussions in WIPO's Standing Committee on the Law of Patents (SCP) regarding the Substantive Patent Law Treaty (SPLT)).

35. Is it possible to find a standard for inventive step / non-obviousness that would be universally acceptable?

Experience with previous discussions in WIPO is not encouraging but we highly appreciate the effort of AIPPI in this respect.

36. Please propose a definition for inventive step/ non-obviousness that would consider to be broadly acceptable.

If at all possible, we could imagine the wording of Alternative A of SPLT to be the one with best chances because it corresponds to the definition of Article 56 EPC and Article 33 PCT. Alternative A reads as follows: "An invention shall be considered to involve an inventive step (be non-obvious) if, having regard to the prior art as defined in Article 8, it would not have been obvious to a person skilled in the art at the filing date or, where priority is claimed, the priority date of the application

claiming the invention, as prescribed in the Regulations."

In this connection, we would like to mention that Mr. S. Kulhlavy (see KULHAVY, Erfindungs- und Patentlehre, Carl Heymanns Verlag 2010) is promoting his own method for determining the inventive step / non-obviousness which is based on the principle of defining the obvious variation of the prior art in contrast to the non-obvious invention without the intervention of the person skilled in the art (see the wording of Article 1, paragraph 2 of the Swiss Patent Law where the reference to this person is missing). The essential points of this method and the steps for the assessment of the inventive activity are attached (Annex I).

37. Please propose an approach to the application of this definition that could be used by examiners and by the courts in determining inventive step / non-obviousness.

The only possible approach, in our opinion, is the well-known trilateral cooperation between the EPO, the USPTO and the JPO which, after agreement of these three, should be extended in a further step – possibly under coordination by the WIPO - to other patent offices.

The most important aspect of such approach should be, in our opinion, that the well-known „ex post facto“ practice of many examiners is avoided, in which different prior art references which have been selected by „googling“ the different aspects of the invention are combined.

***

Summary

The standard for inventive step is defined in the Swiss patent law by Article 1 paragraph 2 which corresponds in the essence to Article 56 EPC. The reference to „the person skilled in the art“ is missing but this difference does not have any consequence in the practice of the courts. The national Patent Office does not carry out substantial examination and thus it does not apply a standard for inventive step. Claims and prior art are interpreted as they would be understood by a person skilled in the art. Lack of inventive step can be found over a single prior art reference, the missing teaching can be provided by common general knowledge. An explicit teaching or motivation to combine two or more prior art references is not required, if the combination would be obvious to the person skilled in the art. In Switzerland the „problem- and solution- approach“ used in the EPO is applied when assessing inventive step. Advantageous effects can play a role, if they are surprising, in determining inventive step. They must be at least implicitly derivable from the as-filed specification and can be supported by later-submitted experimental data. Among the factors supporting inventive step, teaching away can be the most persuading argument. Other secondary considerations are recognized to support inventive step. Commercial success as such is not considered as a relevant argument. In the opinion of the Swiss Group, a harmonization of inventive step is desirable. Alternative A considered in connection with the SPLT should be used as a possible harmonized definition for inventive step. A possible approach for applying such definition could be the trilateral cooperation between the EPO, the USPTO and the JPO which, after agreement of these three, might be extended in a further step – possibly under coordination by the WIPO - to other patent offices.

Zusammenfassung

Im Patentgesetz der Schweiz findet sich die Definition der erfinderischen Tätigkeit im Artikel 1, Absatz 2, welcher im Wesentlichen dem Artikel 56 EPÜ entspricht. Zwar fehlt im schweizerischen Gesetzestext der direkte Bezug zum Fachmann, bezüglich der Gerichtspraxis hat das jedoch keine Konsequenzen. Ausserdem unterliegen die Schweizer Patentanmeldungen keiner sachlichen Prüfung, entsprechend kann das Schweizer Patentamt (Eidgenössisches Institut für geistiges Eigentum) auch auf keinen Standard für die Prüfung der erfinderischen Tätigkeit zurückgreifen.
In der gerichtlichen Praxis ist für die Interpretation der Ansprüche und des Standes der Technik jedoch das Verständnis des Durchschnittsfachmanns massgebend.
Fehlende erfinderische Tätigkeit kann auf einem einzigen Dokument aus dem Stand der Technik

beruhen, wobei eine fehlende Offenbarung durch allgemeines Fachwissen wettgemacht werden kann.
Es reicht ausserdem aus, dass die Kombination von zwei oder mehreren Dokumenten aus dem Stand der Technik für den Durchschnittsfachmann naheliegend ist, eine explizite Lehre oder Motivation zur Kombination der Dokumente ist nicht notwendig.
In Übereinstimmung mit der Praxis des Europäischen Patentamtes wird in der Schweiz für das Feststellen der erfinderischen Tätigkeit auch der „Aufgabe-Lösungs-Ansatz“ angewendet.
Vorteilhafte Wirkungen können eine Rolle spielen und bei der Beurteilung der erfinderischen Tätigkeit mitberücksichtigt werden, insbesondere wenn die Wirkungen überraschend sind. Diese Wirkungen müssen sich allerdings zumindest implizit aus der hinterlegten Fassung der Anmeldung ableiten lassen. Ein späterer experimenteller Nachweis der behaupteten vorteilhaften Wirkung ist durchaus möglich.
Unter den vorteilhaften Faktoren, die die erfinderische Tätigkeit stützen, wird das „teaching away„, also ein Stand der Technik, der direkt von der erfinderischen Lehre wegführt, als besonders überzeugend angesehen. Ebenso können weitere sekundäre Faktoren zum Tragen kommen; der kommerzielle Erfolg gehört regelmässig nicht dazu.
Die Schweizer Arbeitsgruppe ist der Ansicht, dass eine Harmonisierung der erfinderischen Tätigkeit wünschbar ist. Eine Definition gemäss Alternative A, wie sie im Zusammenhang mit dem SPLT diskutiert wurde, wird bevorzugt. Diese Definition könnte im Rahmen einer trinationalen Vereinbarung zwischen dem EPA, dem USPTO und dem JPO eingeführt werden und unter Koordination der WIPO auf weitere Länder ausgedehnt werden.

Résumé

Le critère de l'activité inventive est défini dans la loi suisse des brevets par l'article 1, paragraphe 2 qui correspond essentiellement à l'article 56 de la CBE. Le fait que l'article de la loi suisse ne fait pas référence à „l'homme du métier“, n'a pas de conséquence dans la pratique des cours. L'office national des brevets ne performe pas un examen de fond et, par conséquence, ne considère pas le critère de l'activité inventive. Les revendications et l'état de la technique sont interprétées comme elles seraient comprises par l'homme du métier. Une seule référence de l'état technique peut suffir pour constater qu'il n'y a pas l'activité inventive, le savoir faire général peut apporter le lien. Une instruction ou motivation explicite à combiner deux ou plus de références de l'état de la technique n'est pas nécessaire, si la combinaison est évidente à l'homme du métier. En Suisse, la pratique du „problème/solution“ de l'OEB est appliquée pour l'examen de l'activité inventive. Des effets avantageux peuvent avoir une influence, s'ils sont surprenants, dans l'estimation de l'activité inventive. Il faut que ces effets peuvent être déduits, au moins de façon implicite, de la description comme déposée et ces effets peuvent être substantiés par des données expérimentales fournies postérieurement. Parmis les facteurs soutenants l'activité inventive, un préjugé peut être l'argument le plus persuasif. Des considérations secondaires sont aussi reconnues pour supporter l'activité inventive, mais le succès commercial comme tel n'est pas considéré un argument relevant. Dans l'opinion du Groupe suisse, une harmonisation de la notion de l'activité inventive est désirable. L'Alternative A proposée dans les discussions du SPLT doit être utilisée comme définition de l'activité inventive. Un début de discussion pour l'application de cette définition pourrait être la coopération trilatérale entre l'OEB, l'USPTO et le JPO qui pourrait être étendue après l'accord entre ces trois – éventuellement avec coordination par la WIPO – aux autres offices des brevets.

Annex I

Essential Points of my Method for the Assessment of the Inventive Step

Said method for the assessment of the inventive step is based on my idea, that *new* solutions of a technical problem, which are usually considered as obvious and which are therefore not patentable, are „too“ simple. Therefore, I defined what is an obvious *new* solution of a technical problem. On page 125 in my book “Erfindungs- und Patentlehre” (Carl Heymanns Verlag KG, 2010), said definition is recited as follows:” A new solution, which resulted in an obvious manner from the pertinent prior art is a solution, which uses a known technical means based on its ability to bring about a technical effect which was already known in the pertinent prior art for this known technical means ”.

If an examined *new* solution of a technical problem does not show all features of this definition, i.e. if the *new* solution cannot be subordinated under this definition, then such *new* solution is not obvious. Consequently, such *new* solution involves an inventive step and it is an invention. This result is in line with the relevant provision of the European Patent Convention (EPC) which is sentence 1 in Article 56 EPC:
“An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.”

There are many kinds of inventions. But there is only one kind of an obvious new solution of a technical problem. Consequently, it suffices to define what is an obvious solution, when we will examine inventions. Based on the alternative defined and underlined here in the recitation of Sec. 56 EPC, the use of the definition of an obvious new solution automatically encompasses all kinds of the inventions. Therefore, the examiners do not need to find out what kind the invention could be, when they decide, on the basis of the definition of an obvious solution, that a new solution of a technical problem is an invention.

Enclosed is a list of steps which an examiner or a patent attorney has to carry out, when he is examining the subject matter of a patent application. This list of steps is a refining of the list of steps called “problem-solution-approach” which is used in the European Patent Office. The capital letters in the enclosed list denote the examples of examined cases in my previously cited book.

Considering that Article 33, Sec. 3 PCT has (practically) the same wording as Article 56 EPC, the present method can be used throughout the world.

St. Gallen, February 15, 2011

Sava V. Kulhavy

List of steps for the examination of patent applications

The steps for the assessment of the inventive activity

To carry out the above assessment, the following steps have to be made:

1. For the solution of a problem to be patented, a novelty search in the pertinent prior art is carried out.

2. Of the documents mentioned in the search report, one will be considered as the closest document of the pertinent prior art, the subject matter of which has most features in common with the examined solution.

3. If any, the difference between the solution to be patented and the subject matter of said closest document of the pertinent prior art will be defined. A solution which shows any kind of difference, is considered as new.

4. Said difference(s) is(are) put into the characterizing portion of a two parts claim.
The characterizing portion of the two parts claim defines a technical means for solving a technical problem. Said technical problem is connected to a product or process and is defined in the introductory portion of the two parts claim.

5. With the help of the definition of a solution, which is considered as obvious, one examines whether said difference results from the pertinent prior art in an obvious manner or not. To this end, an attempt is made to subordinate said difference, i.e. said technical means under said definition.

The definition of a new solution which results in an obvious manner from the pertinent prior art reads as follows: “A new solution, which resulted in an obvious manner from the pertinent prior art is a solution, which uses a known technical means based on its ability to bring about a technical effect which was already known in the pertinent prior art for this known technical means”.

6. If the examined new solution falls under this definition of an obvious solution, the examined new solution resulted in an obvious manner from the pertinent prior art. Such a new solution is not an invention. (See the examples A, G and M in Sava Kulhavy: “Erfindungs- und Patentlehre”, Carl Heymanns Verlag, 2010).

7. If the examined new solution does not fall under the definition of an obvious solution, then this examined new solution did not result in an obvious manner from the pertinent prior art. Such new solution involves an inventive step and therefore such new solution is an invention. In this case there are two possibilities:

7a. The new solution does not fall under the definition because the technical means used was new, i.e. not known with respect to the pertinent art. Such an invention is a combination invention. (See the examples B, D, E, K, N and R in said book.)
7b. The new solution does not fall under the definition because the technical means used, although it was already known, solves the given problem by its ability to produce a technical effect which was not yet known in the pertinent prior art for this technical means. Such invention is a so-called “use invention”. (See the examples C, F, H and R in said book.)